













Low- and medium-voltage products and systems

Global product offering for data center applications

ABB supplies data center owners, operators, OEM partners, architecture/engineering firms, general contractors and EPC consultants with a wide range of offerings to automate data centers and make them more powerful, agile, and efficient. We provide a wide range of industrial-grade products, integrated solutions and expertise to ensure data centers operate with optimum reliability and benefit from savings in installation, energy, space and maintenance.

Product / Offering	Benefits and features
<p data-bbox="108 600 304 622">Modular substation</p> <p data-bbox="108 629 193 651">E-house</p> 	<p>Metal enclosed buildings providing greater safety, easier installation, maintenance and engineering, and on site testing – all contributing to cost reductions.</p>
<p data-bbox="108 745 371 768">Skid-mounted substations</p> 	<p>A prefabricated and economic option with easy access to equipment, which normally includes a medium-voltage section, transformer and low-voltage equipment. The skid mounted substation enables a huge reduction in installation time, including the on-site wiring and testing activities.</p>
<p data-bbox="108 898 419 920">Compact secondary substation</p> 	<p>Compact secondary substations are prefabricated substations, which include a low-voltage switchboard, transformer and medium-voltage switchgear. CSS is internal arc tested for higher safety. ABB CSS portfolio is covered with different enclosure material, including steel, concrete, and glass fiber reinforced polyester.</p>
<p data-bbox="108 1055 472 1077">Medium-voltage primary distribution</p> <p data-bbox="108 1084 260 1106">UniGear Digital</p> 	<p>UniGear Digital is an innovative solution based on market-leading industry-standard air-insulated medium-voltage switchgear called UniGear and makes full use of ABB's Relion® protection and control relays, IEC 61850 communication protocol and is combined with the advantages of sensor technology. All this leads to an advanced switchgear solution addressing important requirements of the future:</p> <ul style="list-style-type: none"> - Flexibility - Increased process efficiency - Lower cost of operation - Maximized integration - Reliability and safety
<p data-bbox="108 1451 328 1473">Motor control centers</p> 	<p>UniGear MCC up to 12 kV, 50 kA</p> <p>Designed for the highest degree of safety and reliability, the UniGear MCC provides for maximum ease of use. All operations and maintenance actions are made from the front of the panel, which is equipped with mechanical safety interlocks between the vacuum contactor and earthing switch.</p> <ul style="list-style-type: none"> - Slim and compact panel only 400 mm wide - Wide range of applications - Fused vacuum contactor with magnetic actuator - Fitted with safety interlocks and visible earthing connection

Product / Offering	Benefits and features
<p data-bbox="105 114 363 136">Gas Insulated Switchgear</p> 	<p data-bbox="600 114 804 170">ZX Family up to 42 kV, 40 kA</p> <p data-bbox="600 174 1385 203">GIS provides ultimate protection to medium-voltage electrical distribution</p> <ul data-bbox="600 208 1485 383" style="list-style-type: none"> - All "live" parts are completely protected from external influences like humidity, dust and vermin - Provides safest operating conditions over extended lifetime while minimizing maintenance - Saving space in particular at higher voltage levels - Easy "plug & play" installation
<p data-bbox="105 418 475 441">HD4 – Gas Insulated Circuit Breakers</p> 	<p data-bbox="600 418 1511 622">HD4 circuit-breakers are available in fixed or withdrawable versions. The withdrawable version is available for PowerCube fixed parts and enclosures, UniSafe and UniGear type ZS1 switchgear. HD4 circuit-breakers are used in power distribution to control and protect lines, transformer and distribution substations, motors, transformers, capacitor banks, etc. They are also highly suitable for retrofitting, where the insulating materials of circuits may be sensitive to dielectric stresses.</p>
<p data-bbox="105 629 416 651">VD4 – Vacuum Circuit Breakers</p> 	<p data-bbox="600 629 1511 748">The VD4 vacuum circuit breaker with spring operated mechanism is excellently suitable for switching of short-circuit currents, overhead lines and cables under load and no load, transformers and generators, motors, ripple control systems and capacitors – even in parallel.</p>
<p data-bbox="105 786 496 808">Medium-voltage secondary distribution</p>	
<p data-bbox="105 815 464 837">Air Insulated Secondary Switchgear</p> 	<p data-bbox="600 815 1511 875">UniSec indoor Air-Insulated switchgear for medium-voltage secondary distribution up to 24kV.</p> <p data-bbox="600 880 1511 1055">UniSec metal-enclosed air-insulated switchgear is based on a highly flexible, modular concept with fewer parts and standardized solutions that can be readily configured to meet the specific needs of each application. This approach reduces training and maintenance requirements, ensures fast installation and facilitates future expansion to meet changing needs. UniSec offers highest level of safety with different solutions in terms of internal arc classification and safety interlocks.</p>
<p data-bbox="105 1090 475 1113">Gas Insulated Secondary Switchgear</p> 	<p data-bbox="600 1090 1511 1151">SafeRing / SafePlus is a SF6 insulated ring main unit /compact switchgear platform for the secondary distribution network up to 40.5kV.</p> <p data-bbox="600 1155 1511 1274">Together, SafeRing / SafePlus provides a complete, flexible and compact switchgear system solution. It is a completely sealed system with a stainless steel tank containing all the live parts and switching functions. This ensures a high level of reliability as well as personnel safety and a virtually maintenance-free system.</p>
<p data-bbox="105 1308 496 1330">HD4/R – Gas Insulated Circuit Breakers</p> 	<p data-bbox="600 1308 1511 1453">HD4/R are used in secondary medium-voltage distribution and in MV/LV transformer substations. They are available in fixed version with right-hand side operating mechanism. Circuit-breakers with rated voltage up to 24 kV can be fitted with current sensors and PR521 overcurrent release and can be used in unmanned substations without auxiliary power supply.</p>
<p data-bbox="105 1487 437 1509">VD4/R – Vacuum Circuit Breakers</p> 	<p data-bbox="600 1487 1511 1637">VD4/R are used in secondary medium-voltage distribution and in small transformer substations. They are available in fixed version with right-hand side operating mechanism. Circuit-breakers with rated voltage up to 24 kV can be fitted with current sensors and PR521 overcurrent release and can be used in unmanned substations without auxiliary power supply.</p>

Product / Offering**Protection and safety****Benefits and features****Is-Limiter**

The ultra-fast solution for handling a short circuit current. In short-circuit-fault conditions this fast-acting switching device triggers a small charge to open the main conductor, which is designed to carry high-operating currents in normal conditions. The short-circuit current commutates to a parallel fuse with high breaking capacity, which limits the short-circuit current during the first rise within extremely short times. The Is-Limiter is a unique solution to limit short-circuit currents up to 210kA rms while handling operation currents up to 4000A. The wide range of applications, up to 40.5kV includes power supplies and industry applications through to special applications such as platforms, IPP's or applications with ultra-fast switching requirements. Considering the Is-Limiter on the early engineering phase of a new project or on the extension of an existing system, the Is-Limiter is able to offer technical and economic benefits to our clients.

Ultra-Fast Earthing Switch UFES

Active internal arc protection for switchgear. Innovative arc flash mitigation in less than 4 ms: the highest possible level of arc flash protection for personnel and equipment, maintenance of secure power supply and the reduction of production stoppages. The occurrence of an arc fault, the most serious fault within a switchgear system, is mostly associated with extremely high thermal and mechanical stresses in the area concerned. A new, active arc fault protection system is based on the know-how gained from decades of experience with the ABB vacuum interrupter and IS-limiter technology. This latest arc fault mitigation technology now effectively helps avoid these negative effects should a fault occur.

The ultra-fast earthing switch of the UFESTM-type is a combination of devices consisting of an electronic unit and the corresponding primary switching elements, which initiate a 3-phase short-circuit to earth in the event of a fault. The extremely short switching time of the primary switching element in conjunction with the rapid and reliable detection of the fault, ensures that an arc fault is extinguished almost immediately after it arises (Extinguishing time < 4 ms after detection).

Medium-voltage relays/Distribution Automation**Relion®**

The Relion® family of programmable numerical protection relays offers a full range of genuine IEC 61850 products for the protection, control, measurement and supervision of power systems. IEC 61850 supports interoperable and future-proof solutions including peer-to-peer GOOSE communication. Relion® enables the creation of comprehensive protection schemes for feeders, motors, transformers, generators, busbars, capacitor banks etc.







- Features supporting high situational awareness and communication availability:
- Graphical display and web browser-based human-machine interface
 - Disturbance recorder for in-depth analysis of network disturbances
 - Support for additional communication protocols including use of two communication protocols simultaneously
 - Communication redundancy including HSR and PRP protocols
 - One configuration tool for all Relion® relays

COM600

Web server functionality providing access to substation processes, operations and relays via a web browser (web HMI)

Substation Automation function and its features enabled by default

- Process visualization based on web HMI
- Alarms and events
- IEC 61850-based integration to ABB or third party relays
- Remote relay parameter setting using SPA protocol or IEC 61850
- Relay disturbance record upload
- Operational and user security

Product / Offering	Benefits and features
<p data-bbox="108 120 422 136">Low-voltage power distribution</p> <p data-bbox="108 143 406 197">MNS conventional – ANSI/IEC power distribution switchgear</p> 	<p data-bbox="603 143 1513 293">MNS conventional is ABB's global solution for power distribution up to 690V / 6300A / 250kA (IEC) and 600V / 5000A / 100kA (ANSI) respectively. With options for fixed, plug-in and withdrawable breakers and modules and top or bottom power cable and bus duct connections, MNS offers unrivalled flexibility.</p> <p data-bbox="603 300 1513 412">MNS is fully arc-proof as per the applicable IEC and ANSI/UL standards, respectively, thus setting the standard for operator and equipment safety. The maintenance-free bus bar design and its withdrawable Emax 2 circuit breaker help minimize maintenance and unscheduled downtime.</p>
<p data-bbox="108 450 395 504">MNS R – Rear access power distribution switchgear</p> 	<p data-bbox="603 450 1513 712">MNS-R is a rear-accessible variation of MNS, ABB's global solution for power distribution. It offers top performance up to 690V / 8000A / 150kA. With up to four breakers stacked in a vertical section and innovative distribution feeder arrangement, MNS-R offers significant footprint reduction. Flexibility is ensured through top and bottom power cable and bus duct connections and the ability to mount the main bus bars in top, bottom or central. MNS-R is arc-proof and offers fully segregated power cables. Service continuity is guaranteed through withdrawable power circuit breakers and segregation form up to form 4b (IEC) and form 4 type 7 (BS) respectively.</p>
<p data-bbox="108 748 507 801">MNS-Up – Integrated power supply solution for mission-critical applications</p> 	<p data-bbox="603 748 1513 1167">MNS-Up is a fully integrated combination of two of ABB's key products for data centers and other mission-critical applications – our MNS power distribution switchgear and our ConceptPower DPA500 UPS. MNS-Up does away with external cable or bus duct connections between switchgear, bypass and UPS, thereby minimizing the footprint and reducing installation and commissioning time. Delivered as a completely factory-tested assembly, MNS-Up also offers the highest level of quality. MNS-Up is scalable in 100 kW increments up to 3 MW, allowing users to adapt the power distribution solution to their actual needs and pace their investment. Flexibility is further enhanced by options for installation in a straight line, back-to-back or in L- or U-shape to optimize room utilization. ABB's exclusive Decentralized UPS Paralleling Architecture (DPA™) with N+1 redundancy at module level ensures service continuity as well as easy, quick and safe replacement.</p>
<p data-bbox="108 1196 352 1249">Main distribution boards System pro E power</p> 	<p data-bbox="603 1196 1513 1406">System pro E power is the ABB solution for main distribution switchboard with rated current up to 6300A and short-circuit current up to 120kA. It meets all types of installation requirements, degrees of protection, and the electrical and mechanical specifications. ABB System pro E power provides complete solutions for main power distribution in infrastructure and industries in accordance with the Standard IEC 61439. In addition, it guarantees full compatibility with all other ABB products.</p>
<p data-bbox="108 1442 438 1496">Sub distribution board System pro E energy – TwinLine</p> 	<p data-bbox="603 1442 1513 1742">With TwinLine N 55 we have a perfect system in achieving space savings for RPP (Remote Power Panels). TwinLine N 55 is a welded system up to 850A, with protection class I and II, IP rate 55. All in accordance to IEC 61439 and DIN EN 61439 Parts -1, -2 and -3. Continuity is the guiding principle for these wall-mounted and floor standing cabinets for distribution assembly – from the degree of protection, over the ease of installation, to the wide range of portfolio we can meet all requirements in the field. System intelligence comes as standard with TwinLine in combination with System pro E combi – CombiLine modules. TwinLine offers unlimited possibilities for all internal combinations.</p>
<p data-bbox="108 1778 391 1832">Automation boards System pro E control – IS2</p> 	<p data-bbox="603 1778 1513 1861">System pro E control – IS2 is the ABB range of metal structures and boxes for industrial automation and controlgear switchboards compliant to several international standards such as the IEC 62208, to the new IEC 61439-1-2 and UL 50.</p>

Product / Offering**Emax 2 circuit breakers****Benefits and features**

ABB Emax 2 is the new benchmark of air circuit-breakers that not only monitors power, but has evolved into a true power manager. It is offered in frame sizes up to 6300A for applications in accordance to IEC 60947 and UL 1066 standards – with exclusive integrated functions such as the Ekip power controller, generator protection and network analyzer functions. Emax 2 is the only breaker that protects electrical circuits and also reduces energy consumption based on the user's needs, thereby leading to massive reductions in energy waste. Emax 2 contains the perfect blend of control, connectivity, safety and performance. Installing Emax 2 power circuit breakers in data center could result in footprint savings of 20% for the switchboard, providing additional square meters for IT equipment.

Tmax XT circuit breakers

ABB's molded case circuit breakers guarantee an extremely high performance level while being progressively smaller in size, simple to install and able to provide increasingly better safety. Our Tmax XT range is complete with four frame sizes: XT1, XT2 up to 160A, and XT3, XT4 up to 250A. Our Tmax T range completes the offering from 320A up to 1600A.

SlimLine XR - Switch disconnecter fuse

The SlimLine XR meets increasing demands in the industry for safe and reliable energy distribution. Thanks to the unique contact design and compact size, the installation is safe, fast and easy. For remote operation and monitoring, SlimLine XR is available with an integrated motor, electronic fuse monitor (EFM) or the new integrated energy monitoring device ITS2.

SMISLINE TP

Being the world's first pluggable socket system, SMISLINE TP ensures that load-free devices and components can be snapped on and off under voltage without the need for additional personal protective equipment to guard against electrical hazards. Saving time thanks to the easy plug-in system and saving space devices during first installation and maintenance, thanks to the vertical installation of the bus-bars socket. The switchboard is easy and quick to maintain since the input wiring is already integrated in the plug-in socket system, thus the installation is better arranged and tidier, making it possible for non-qualified personnel to check. All the above mentioned benefits ensure maximum flexibility, expandability and availability.

Current and voltage sensors









As an expert in low-voltage and control systems, we offer sensors that can handle rough applications and combine excellent accuracy, reliability and robustness.


Power distribution units**Cyberex® PDU**

The Cyberex PDU combines flexible output distribution and a large array of transformer options to provide the most versatile PDU offering in the industry. Features include touch safe, selectively coordinating, current limiting breaker options, along with energy efficient transformers. Add Cyberex's Circuit Management System and take complete control of your data center's power.

MNS PDU – Power distribution for mission-critical applications

MNS PDU is a power distribution panel based on the MNS platform. It delivers continuous power and energy monitoring at rack-level. With its increased current carrying capacity vs. conventional PDU's, MNS-PDU allows for space-saving and more economic data center build-out. MNS PDU consists of incoming ACB sections and outgoing MCCB sections with options for fuses, integrated static transfer switches, active harmonic filters and complete monitoring solutions. MNS-PDU is designed around ABB's unique finger-safe multi-function wall that separates the devices from the bus bar. In line with the underlying theme of maximized operator safety MNS-PDU uses ABB's touch-proof SMISLINE-TP plug & socket system. Flexibility is another key benefit of MNS PDU with its scalable and modular design using "plug as you grow" approach.

Product / Offering	Benefits and features
<p data-bbox="108 120 384 136">Remote Panel Panels (RPP)</p> <p data-bbox="108 143 443 159">Configurable remote power panel</p> 	<p data-bbox="603 143 1513 322">ABB's configurable Remote Power Panel (RPP) helps to meet the demands of power-intensive applications, delivering unsurpassed power monitoring and distribution with up to 240 poles in a safe, reliable, space-saving footprint. The RPP is the ideal solution for data center engineers, saving the time for planning and drawing of the RPP. The preconfigurable RPP can dramatically reduce the certification costs and ensure continuous power to critical applications.</p>
<p data-bbox="108 360 293 376">RPP from Cyberex</p> 	<p data-bbox="603 360 1513 472">Today's data centers require the highest level of reliability and performance. The Cyberex RPP Series provides the flexibility to expand your data center distribution capabilities. Fed from your existing PDM, the RPP readily provides up to (4) 42 circuit output panelboards and (4) source breakers.</p>
<p data-bbox="108 508 448 562">MNS RPP – Power distribution for mission-critical applications</p> 	<p data-bbox="603 508 1513 598">MNS RPP is a scalable remote power panel with up to 168 branch circuits with branch circuit monitoring and optional main feeder circuit management. It offers continuous power and energy monitoring at rack-level.</p> <p data-bbox="603 604 1513 658">An optional upgrade to MNS iRPP offers further enhanced branch-level power monitoring / management.</p> <p data-bbox="603 665 1513 719">MNS RPP can be configured for top or bottom cable entry, making it suitable for both, non-raised and raised floor installation.</p> <p data-bbox="603 725 1513 779">MNS-RPP uses ABB's touch-proof SMISSLINE-TP plug & socket system, offering unparalleled operator safety.</p> <p data-bbox="603 786 1513 840">Hot-swappable and -expandable design increase flexibility and minimize unwanted downtime.</p>
<p data-bbox="108 875 325 898">Protection and safety</p> <p data-bbox="108 904 293 927">Arc Guard System</p> 	<p data-bbox="603 904 1513 1084">The Arc Guard TVOC-2 builds on the well-appreciated TVOC design and offers unmatched arc monitoring. With over 35 years of experience, Arc Guard System™ has become an industry standard in several key markets, helping to protect personnel and businesses around the world. The TVOC-2 is an optical detection system that together with an external breaker can limit the damage done to personnel and equipment in case of an arc accident happening.</p>
<p data-bbox="108 1122 357 1144">Surge protection devices</p> 	<p data-bbox="603 1122 1513 1234">The OVR range is designed to protect electrical systems and equipment against transitory surges and impulses caused by lightning and operations on the electrical grid. QuickSafe is a new generation of Surge Protection Device (SPD) with improved performance.</p>
<p data-bbox="108 1270 464 1292">Metering, monitoring and signalling</p> <p data-bbox="108 1299 288 1321">Electricity meters</p> 	<p data-bbox="603 1299 1513 1451">Managing electrical supply is a priority. Without measuring usage, it is hard to determine efficiency. Measuring an electrical installation can save effort and money. The addition of energy meters for sub-metering and a current measurement system for branch supervision enables the monitoring of energy usage, from the incoming energy all the way down to the last branch.</p>
<p data-bbox="108 1487 437 1509">Circuit Monitoring System (CMS)</p> 	<p data-bbox="603 1487 1513 1688">The circuit monitoring system (CMS) is a family of unique ultra-compact and high-performance multichannel measurement systems for branch monitoring. The system consists of a control unit and sensors with different measurement ranges and mounting possibilities. The sensors are measuring alternating (AC), direct (DC) and mixed currents up to 160A. Up to 64 sensors can be connected to each control unit. The measurement data can be remotely queried by a Modbus system via RS485 Modbus RTU interface.</p>
<p data-bbox="108 1727 288 1749">Network Analyzer</p> 	<p data-bbox="603 1727 1513 1879">Energy efficiency, minimized costs and high system availability represent three central aspects of electrical systems. For full installation monitoring, ABB offers a front-panel range of network analyzers: M2M and ANR are able to measure and record network parameters, energy consumption and alarms, routing data to supervision and monitoring systems.</p> <p data-bbox="603 1886 1513 2029">They also work as panel manager thanks to the digital inputs, used to gather the information about the status of other devices in the panel in a unique device. The status of the other devices, as well as energy pulse inputs from energy meters, can remotely monitored via bus to a supervision monitor thanks to the wide range of available communication protocols.</p>

Product / Offering	Benefits and features
Switch and disconnect	
Limit switches	Limit switches are the easiest way to convert mechanical movement in to electrical signals. They combine different types of actuators, casings and contacts and are perfectly suited to a large variety of applications, whatever the environment.
	
Switch-disconnectors	The OT range of switch disconnectors from 16 to 4000A is suitable for diverse applications such as machinery, power distribution and motor control centers. Thanks to a modular design, OT switches are available in different pole configurations. Mounting is possible in any direction and a wide offering of accessories is available.
	
Switch fuses	OS switch fuses range from 20 to 1250A and are suitable for different types of fuses: DIN, BS, NFC, J and L. OS switch fuses have a modular design and are available in different pole configurations. ABB offers ready and tested type 2 coordination tables for easy and fast selection of motor control devices.
	
Transfer and change-over switches	ABB's transfer switch range from 16 to 3200A includes switches for transfer of loads from one source to another manually, remotely or automatically. Adequate durability has been ensured by testing against the IEC 60947-6-1 standard in the specification of endurance requirements. The switches have a comprehensive range of built-in safety features. The motorized and automatic change-over switches are also equipped with a handle for manual operation in case of emergency.
	
Terminal blocks	SNK series terminal blocks offer high productivity and space saving, an excellent marking visibility which are important values in data centers where a large number of connections are handled. The range is available in PI-Spring (Push-in and spring), screw clamp and plug-gable technologies with common accessories. Connecting capacity from 0.22 to 95 mm ² (24 to 0000 AWG).
	
HVAC motor control and protection	
Installation Contactors	ESB installation contactors are mainly used in buildings for switching and controlling lighting, heating, ventilation, motor and pumps. They are designed to match the ABB modular DIN-Rail components and can be easily integrated into dedicated panels. EN contactors have a built-in toggle switch for automatic and manual application.
	
Manual Motor Starters	Manual motor starters are electromechanical protection devices for the main circuit. They are used mainly to switch motors manually ON/OFF and to provide fuseless protection against short-circuit, overload and phase failures. Fuseless protection saves costs, space and ensures a quick reaction under short-circuit condition by switching off the motor within milliseconds. Starter combinations are set up together with contactors.
	
Motor Controllers	The intelligent ABB Motor Controllers (Universal Motor Controller, UMC) for motor protection, motor control, fieldbus and Ethernet communication and fault diagnosis. Due to the benefits it provides, the UMC is used worldwide in many segments and in projects with several thousand motor controllers.
	
Soft Starters	ABB's soft starters increase a motor's lifetime by protecting it from electrical stresses. They do so by letting you optimize starting currents that with conventional starting methods put lots of stress on the motor. With many built-in motor protection features, your motor is safe in its hands. ABB's soft starters are also installation-friendly and can cut your assembly and startup time by being easy to use and easy to learn. With everything that you need in one unit, from bypass contactor to overload protection, a single soft starter makes for a compact and complete starting solution. Furthermore, with many application specific features, ABB's soft starters can ultimately help you increase productivity. Torque control, pump cleaning and many more features let you do more than simply softstarting.
	

Product / Offering

3-Pole Contactors and Overload Relays for Motor Starting and Power Switching



Benefits and features

ABB 3-pole contactors offer an exhaustive selection of products for simple and extreme applications as well as products with specific purposes. The AF contactor technology revolutionizes how we use contactors and allows use in all parts of the world and in a variety of network conditions. Furthermore, the mini-contactor range offers compact dimensions and specific connection possibilities. The AS contactor is efficient and allows optimization of equipment design. You can choose terminals between screw, spring and ring tongue from our range of products.

4-Pole Contactors for Power Switching



ABB's AF 4-pole contactor range is a complement to the family of 3-pole AF contactors and motor protection equipment. Unmatched performance in a variety of applications and environments has made the AF contactors well appreciated by customers throughout the world. You can also benefit from the compactness of the 4-pole mini contactors available with 3 connection types.

Intelligent Building Control

ABB i-bus KNX



ABB i-bus KNX is the intelligent building system that meets the highest requirements for applications in building control data centers. By controlling applications such as lighting, heating, ventilation and air-conditioning building operators can benefit from comfort, security and energy efficiency. The system is based on the simple and proven KNX technology, which is accepted as the world's first open standard for the control of all types of intelligent buildings – industrial, commercial or residential.

Installation products

Cable ties, tools and accessories



ABB offers one of the industry's broadest ranges of innovative solutions for fastening, bundling and securing wire and cable, including the trusted Ty-Rap®, Ty-Fast® and Spec-Kon® cable tie brands in multiple sizes, colors and specialty materials for demanding applications. Our range also covers many mounting bases and easy-to-use tools.

- Hook-and-loop fasteners for bundling low-voltage and fiber optic cabling
- Plenum-rated for use in air-handling spaces above ceilings and under floors
- Weather-resistant for rooftops and other outdoor applications
- UL® Listed for metal-clad cable support in walls

Wiring duct



Premium quality duct for point-to-point wiring is ideal for electrical enclosures, machine building and data/communications panels and cabinets. Offering includes imperial, metric and DIN duct in standard materials and specialty materials that are halogen-free.

Wire termination and tools



A full line that includes insulated and non-insulated terminals, splices, wire joints, disconnects, ferrules, heat-shrinkable terminals, splices and disconnects in imperial and metric sizes. A complete set of tooling is included. Products are IEC, UL® listed and CSA certified.

Shield-Kon® coaxial grounding connectors


















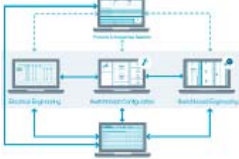
- One- and two-piece coaxial connectors for grounding
- Save time and reduce assembly costs
- Safe monitoring and simple operation
- Low profile and compact size

Heatshrink solutions



A broad range of heat shrink products with different wall thicknesses (thin, medium, thick), packaging (reels, cut lengths, dispenser boxes, pre-cut bags), shrink ratios (2:1, 3:1, 4:1), different colors, pre-molded parts, with or without glue are offered (dual).

Product / Offering	Benefits and features
<p>Safety labels, tags, signs and barricade tapes</p> 	<p>Safety labels, tags, signs and barricade tapes</p> <ul style="list-style-type: none"> - Help to ensure personnel and workplace safety - Conform to NECR 2012 Section 110.3(A)(1) - Highly visible and long-lasting materials - Barricades and burial marking tapes in a variety of materials and colors - Custom labels, tags and signs
<p>Compression cable lugs and tools</p> 	<p>AWG, IEC and DIN compression connectors, made of the highest-grade materials offering high conductivity/low resistance, meet or exceed all industry standards. Range includes straight and angled connectors and splices, plus a full range of mechanical, pneumatic, and battery operated compression tools. Specifically for space saving applications we offer:</p> <p>Narrow-tongue Lugs</p> <ul style="list-style-type: none"> - Consistent narrow width from barrel to tongue to fit into tight spaces - Featuring the Color-Keyed® Installation Tooling System that ensures proper connections - Space-saving 90°, tee and cross connections - Use with standard compression lugs and splices and install with standard compression tools
<p>DuraGard® pin-and-sleeve connectors</p> 	<ul style="list-style-type: none"> - Complete line of 20–60A (600VAC/250VDC max.) connectors, plugs and receptacles - UL94V-0 flammability-rated, corrosion-resistant non-metallic housings - Waterproof whether mated or unmated
<p>Fittings</p> 	<p>CHASE® Fittings</p> <ul style="list-style-type: none"> - Compact, low-profile fittings – ideal for limited space - Line encompasses nipples and hubs for rigid conduit, as well as liquid-tight conduit fittings and cord connectors <p>Multi-Hole cord grips</p> <ul style="list-style-type: none"> - Space- and labor-saving metallic or non-metallic cord fittings for panels - Up to 4-to-1 SKU reduction – purchase, stock and install one fitting versus four
<p>Carlton ENT (Electrical Non-metallic Tubing) system</p> 	<ul style="list-style-type: none"> - To be used within the air-handling spaces beneath raised floors for informational technology equipment as per NEC® Sections 300.22(D) and 645.5(E) - Material-handling savings with lightweight, flexible coils - Installs in half the time of comparable EMT conduit
<p>Cable tray & metal framing systems</p> 	<p>T&B® cable tray is a cost effective, reliable and adaptable alternative to conduit systems. Additionally ABB offers a comprehensive lines of metal framing including the industry's only 100% plated products, our 1 1/2" modular system, and hundreds of accessories to complete any job.</p>
<p>Grounding systems</p> 	<ul style="list-style-type: none"> - Superior grounding and bonding of electrical systems and equipment - EZGround™ connectors provide a consistent, irreversible bond - Connectors require no special tools to install
<p>Flexible braids</p> 	<ul style="list-style-type: none"> - Variety of flexible straps and accessories for grounding - Extra-flexible links for heavy-duty applications to 3,600A - Standard links for medium-duty applications to 2,350A
<p>Signal reference grid connectors and clamps</p> 	<ul style="list-style-type: none"> - Secures grid grounding to raised floor posts - No kinks or bends with lay-in feature - Range-taking design - Quick and easy installation

Product / Offering	Benefits and features
<p data-bbox="108 114 598 136">Grounding bushings & bonding locknuts</p> 	<p data-bbox="608 114 1500 136">Blackjack® Grounding Bushings</p> <ul data-bbox="608 143 1500 257" style="list-style-type: none"> - Dual rated for grounding and bonding of threaded and unthreaded conduit, aluminum and copper wire - Speeds installation and improves aesthetics - UL® listed and CSA Certified <p data-bbox="608 264 1500 286">Bonding Locknuts</p> <ul data-bbox="608 293 1500 353" style="list-style-type: none"> - Ensure positive bonding of conduit to enclosure - Available in steel or aluminum
<p data-bbox="108 383 598 443">Distribution switchgear and molded vacuum interrupters</p> 	<p data-bbox="608 383 1500 443">Solid EPDM insulating media makes them maintenance-free and environmentally friendly – no oil, no gas</p> <ul data-bbox="608 450 1500 600" style="list-style-type: none"> - Compact modular switchgear designs allow for smaller footprint and field assembly inside tight vaults - Molded vacuum interrupters provide compact, lightweight, submersible protection with predictable tripping for ease of upstream/downstream coordination
<p data-bbox="108 629 598 651">Industrial plug and sockets – Easy & Safe</p> 	<p data-bbox="608 629 1500 757">Basic range of industrial plugs and sockets for 16-32A with high requirements on quality, safety and functionality. Plugs, connectors, sockets and inlets for surface and panel mounting. Compact design makes 'Easy & Safe' suitable for applications with limited space.</p>
<p data-bbox="108 779 598 801">Industrial plugs and sockets – Modular Combi</p> 	<p data-bbox="608 779 1500 929">Modular Combi is an effective fully customized system with a combination of IP&S outlets and inlets, Schuko outlets and ABB DIN-rail components in a robust metal or plastic box. Managing power this way is rational and safe. Modular Combi is very easy to install, delivered fully assembled and wired, only one feeding cable is needed. It is easy to modify in the future for additional needs.</p>
<p data-bbox="108 965 1500 987">Services and Support</p>	
<p data-bbox="108 994 598 1016">Service</p> 	<p data-bbox="608 994 1500 1144">The services offered by ABB for the low- and medium-voltage products and systems span the entire value chain, from the moment a customer makes the first inquiry to disposal and recycling of the product. Throughout the value chain, ABB provides training, technical support and customized contracts. All of this is supported by one of the most extensive global sales and service networks.</p>
<p data-bbox="108 1205 598 1227">Consultancy</p> 	<p data-bbox="608 1205 1500 1489">Finding the best technology solution for your electrical system designs is easy with ABB's comprehensive selection tools and extensive technical documentation. We offer highly functional and easy to deploy products to support a wide range of projects. And we want to support you at each stage of your project, with design software, training materials, configuration and product selection tools. Whether you're looking to deliver energy efficiency, space savings, easily maintained systems or overall project cost reduction for your customers, with the breadth of our offering you can deliver customized solutions to meet your project goals and streamline engineering processes.</p>
<p data-bbox="108 1503 598 1525">Design software</p> 	<p data-bbox="608 1503 1500 1630">Choosing the right products for complex installations can be extremely time consuming. ABB provides a wide range of software and mobile applications to help you select precisely what you need, in a simple yet effective way. Choosing, dimensioning and drawing your application has never been easier.</p>

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